ABSTRACT:

INTRODUCTION:

Insulin ,a member of a family of growth factors that includes insulin like growth factors exerts mitogenic effects on normal and malignant epithelial cells,acting via insulin and IGF receptors .Insulin resistance leads to overexpression of insulin receptors and leads to malignant transformation of cells . Fasting insulin levels has long been considered the most practical approach for the measurement of insulin resistance

AIM & OBJECTIVE:

1. To assess the prevalence of insulin resistance in non-diabetic carcinoma breast patients
2. To document fasting insulin levels in the same cohort of patients
3. To observe the clinical pattern & pathological characteristics of disease in patients with insulin resistance.
4. To aid in further studies to assess the pharmaco therapeutic use of Metformin in carcinoma breast patients with insulin resistance, with the analyzed results

MATERIALS AND METHODS**:**

This is a prospective study conducted in the **DEPARTMENT OF GENERAL SURGERY**, **GOVERNMENT STANLEY MEDICAL COLLEGE** from October 2016 to September 2017.This study includes all patients diagnosed as carcinoma breast, who is a non-diabetic. The relevant details collected includes clinical, radiological, pathological and biochemical profile of patients with carcinoma breast.Fasting insulin levels - venous sample taken after overnight fasting and levels are obtained using insulin assays. Excluded were patients who are known case of diabetes mellitus & found to be diabetic during the course of evaluation.

TYPE OF STUDY:

Prospective time bound study

RESULTS:

Insulin resistance as documented by increased fasting insulin levels was found in 5 out of 29 patients , which accounts to 17 %,which is slightly lower than a study conducted at korea,which showed 26.4% prevalence of insulin resistance and was associated with larger tumours. Another study from Italy shows 46.95 % resistance with advanced breast cancers and with poor survival rates. This insists the need for this study in mass populations to screen for insulin resistance. The incidence of triple negative breast cancer is 34% present which is slightly higher when compared to other studies.Insulin resistance was found more in women < 50 yrs of age(3 /5),in the analyzed cohort of patients.

CONCLUSION:

Insulin resistance was found among 17 percent of the study population, which is slightly less than other published studies.

Out of them, 60 percent had ER NEGATIVE , PR NEGATIVE , & HER 2 neu positive disease, and 60 percent of the women who had insulin resistance had locally advanced breast cancer and underwent neoadjuvant chemotherapy followed by mastectomy.

The study states that, insulin resistance which is considered a risk factor for many cancers, including carcinoma breast, might be prevalent in patients with normal glucose levels and in the absence of any symptoms. Screening them may be useful in identifying this cohort of patients and treating them with tailored insulin resistance lowering agents like metformin which was found to have anti tumourogenic activity , as well as complete pathological response

RECOMMENDATIONS :

Screening of carcinoma breast patients for insulin resistance ,with fasting insulin levels & fasting glucose levels which might help in identifying them at the earliest.

In our study, the inability to identify breast cancer patients at the earliest might suggest ignorance and lack of awareness of our people to the wide spread screening tests & proactive campaign about breast cancer.To improve and strengthen our screening tests for detecting carcinoma breast at an early stage.